

METRIC

MIL-C-85045/14A
21 May 1992

SUPERSEDING
MIL-C-85045/14(SH)
30 November 1988

MILITARY SPECIFICATION SHEET

CABLE, FIBER OPTIC, ONE FIBER, CABLE CONFIGURATION TYPE B (PIGTAIL),
LOOSE TUBE, CABLE CLASS MM OR SM, (METRIC)

This specification is approved for use by the Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of specifications and Standards (DODISS) specified in the solicitation: MIL-C-85045.

CLASSIFICATION

Fiber optic cable configuration type: 2 (OFCC).

Fiber cable type: MM (graded-index, glass core and glass cladding multimode).
SM (dispersion - unshifted, glass core and glass cladding singlemode)

DESIGN AND CONSTRUCTION:

Fiber: Type MM shall be in accordance with MIL-F-49291/06.
Type SM shall be in accordance with MIL-F-49291/07.

Color code: Orange - type MM.
Yellow - type SM.

Dimensions and configuration: See figure 1.

Number of optical fibers: 1.

Cable configuration: 1 OFCC (loose tube construction).

Mass per unit length: ≤ 15 kg/km.

Cable continuous length: ≥ 1.1 km.

PERFORMANCE REQUIREMENTS:

Optical Properties:

Change in optical transmittance: Measurements to be made at 1300 ± 20 nm.

Maximum attenuation rate: 4.5 dB/km at 850 ± 20 nm, 2.0 dB/km at 1300 ± 20 nm for type MM fiber.
1.0 dB/km at 1310 ± 20 and 1550 ± 20 nm for type SM fiber.

ENVIRONMENTAL:

Temperature range:

Operating: -28°C to 85°C .

Storage: -62°C to 85°C .

Storage temperature: Applicable.

AMSC N/A

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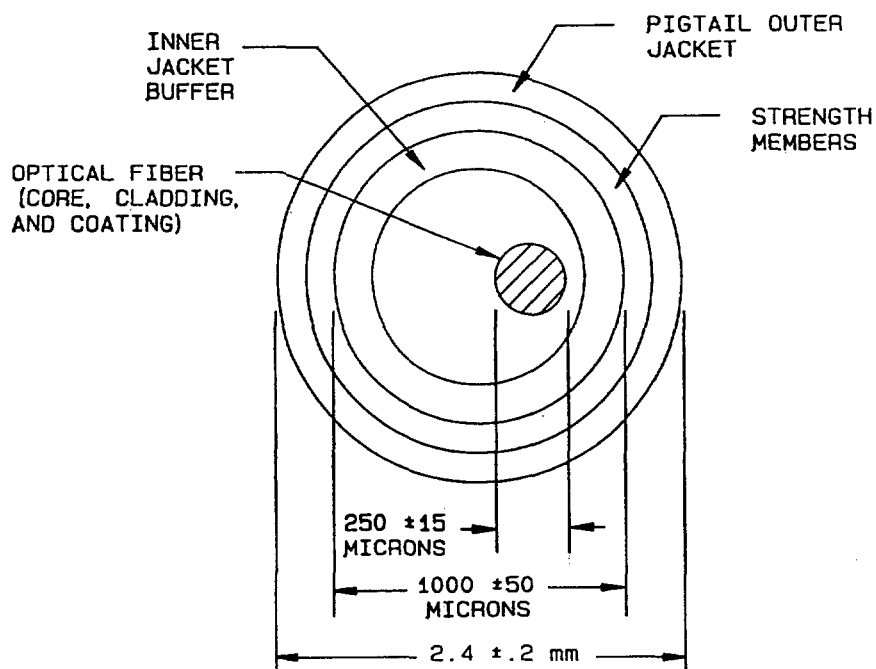


FIGURE 1. Single fiber optical cable pigtail.

Shock: Applicable.

MECHANICAL PROPERTIES:

Tensile loading and elongation: Applicable.

Tensile loading: ≥ 270 N.

Operating tensile load: Applicable.

Dynamic bend: N/A.

Twist bending: The test load shall be 10 N.

Crush: The test load shall be 250 N at a rate of 250 N/min.

Fluid immersion: N/A

Impact: N/A.

Corner bend: N/A.

CHEMICAL PROPERTIES:

Smoke generation: ≤ 225 when tested in accordance with ASTM' E 662.

Halogen content: $< 0.2\%$.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - SH
Air Force - 85

Review activities:

Army - MI, AR, AV
Navy - EC, YD
Air Force - 13, 17, 19, 80, 90, 99
DLA - ES
NASA - NA

User activities:

Navy - OS

Preparing activity:

Navy - SH

Agent:

DLA - ES

(Project 6015-0025-02)